

Improved Processing Method for MRI Contrast Images

Tech ID: 33907 / UC Case 2022-942-0

BRIEF DESCRIPTION

A novel method using Diffusion Tensor Imaging (DTI) combined with Statistical Parametric Mapping (SPM) as an effective diagnostic tool for Traumatic Brain Injury.

FULL DESCRIPTION

Researchers at UC Irvine have developed a novel MRI processing method by strategically combining Diffusion Tensor Imaging (DTI) alongside Statistical Parametric Mapping (SPM) as an effective diagnostic tool for Traumatic Brain Injury (TBI). Their research has shown a maximal Area Underneath the Receiver Operating Characteristic Curve (AUROC) of 1.000, indicating perfect diagnostic capability.

SUGGESTED USES

- » Diagnostic tool in medical imaging centers and hospitals
- » Research tool in clinical studies focusing on brain injuries
- » Adjunct diagnostic methodology in neurology and radiology
- » Development of personalized treatment plans for TBI patients

ADVANTAGES

- » Non-invasive imaging technique
- » Provides a standardized methodology for TBI diagnosis
- » Potential for case-specific evaluation to refine diagnosis
- » Opens avenues for further validation and optimization based on larger patient cohorts
- » High diagnostic accuracy

PATENT STATUS

Patent Pending

RELATED MATERIALS

- » Micah Daniel Vinet, Alexander Samir Ayoub, Russell Chow, Joseph C. Wu, Validation of diffusion tensor imaging for diagnosis of traumatic brain injury, Neuroscience Informatics, Volume 4, Issue 2, 2024.

CONTACT

Ben Chu
ben.chu@uci.edu
tel: .



OTHER INFORMATION

KEYWORDS

Traumatic Brain Injury, MRI, TBI

CATEGORIZED AS

- » **Imaging**
 - » Medical
 - » Software
- » **Medical**
 - » Disease: Central Nervous System
 - » Imaging
 - » Software

RELATED CASES

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5270 California Avenue / Irvine, CA
92697-7700 / Tel: 949.824.2683



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